<u>**CLAIMS:**</u>

We claim:

1   1.   In a digital communications network, a method comprising:

2   monitoring a plurality of links to determine state changes of the links;

3   enforcing an IMA-ID check when an insufficient links state is reached;

4   relaxing the IMA-ID check when all the links are in an error state; and

5   re-enforcing an IMA-ID check when at least one link of the plurality of links

6   recovers from an error state .

1   2.   The method of claim 1, further comprising enforcing the IMA-ID check if a

2   near end IMA-ID does not match a far end IMA-ID.

1   3.   In a digital communications network, a method comprising:

2   restarting an existing IMA group, comprising

3   learning an IMA group ID of a far end IMA group;

4   making the IMA group ID persistent;

5   using only links matching the IMA group ID; and

6   placing non-matching links in an unusable state.

1   4.   The method of claim 3, wherein learning an IMA group ID further

2   comprises:

3   resynchronizing the IMA group; and

4   extracting the IMA group ID from a first connected link.

1   5.   The method of claim 3, wherein making the IMA group ID persistent

2   further comprises storing a new IMA group ID in memory.

1   6.   The method of claim 3, wherein using only matching links further

2   comprises screening IMA links having an IMA group ID that are involved in

3   unintentional IMA group restarts for a matching stored IMA group ID.

4   7.   The method of claim 3, further comprising looping back all links.

1   8.   The method of claim 3, further comprising marking all links as unusable.

1   9.   In a digital communications network, a system comprising:

2   means for monitoring a plurality of links to determine state changes of the

3   links;

4   means for enforcing an IMA-ID check when an insufficient links state is

5   reached;

6   means for relaxing the IMA-ID check when all the links are in an error

7   state; and

8   means for re-enforcing an IMA-ID check when at least one link of the

9   plurality of links recovers from an error state .

10. The system of claim 9, further comprising means for enforcing the IMA-ID check if a near end IMA-ID does not match a far end IMA-ID.

11. In a digital communications network, a system comprising:

means for restarting an existing IMA group, comprising

means for learning an IMA group ID of a far end IMA group;

means for making the IMA group ID persistent;

means for using only links matching the IMA group ID; and

means for placing non-matching links in an unusable state.

12. The system of claim 11, wherein learning an IMA group ID further comprises:

means for resynchronizing the IMA group; and

means for extracting the IMA group ID from a first connected link.

13. The system of claim 11, wherein making the IMA group ID persistent further comprises storing a new IMA group ID in memory.

14. The system of claim 11, wherein using only matching links further comprises screening IMA links having an IMA group ID that are involved in unintentional IMA group restarts for a matching stored IMA group ID.

15. The system of claim 11, further comprising looping back all links.

16. The system of claim 11, further comprising marking all links as unusable.

17. A computer-readable medium having stored thereon a plurality of instructions, said plurality of instructions when executed by a computer, cause said computer to perform the method comprising:

monitoring a plurality of links to determine state changes of the links;

enforcing an IMA-ID check when an insufficient links state is reached;

relaxing the IMA-ID check when all the links are in an error state; and

re-enforcing an IMA-ID check when at least one link of the plurality of links

recovers from an error state .

18. The computer-readable medium of claim 17 having stored thereon additional instructions, said additional instructions when executed by a computer, cause said computer to further perform enforcing the IMA-ID check if a near end IMA-ID does not match a far end IMA-ID.

19. In a digital communications network, a method comprising:

restarting an existing IMA group, comprising

learning an IMA group ID of a far end IMA group;

making the IMA group ID persistent;

using only links matching the IMA group ID; and

placing non-matching links in an unusable state.

20.   The computer-readable medium of claim 19 having stored thereon additional instructions, said additional instructions when executed by a computer for learning an IMA group ID, cause said computer to further perform:

resynchronizing the IMA group; and

extracting the IMA group ID from a first connected link.

21.   The computer-readable medium of claim 19 having stored thereon additional instructions, said additional instructions when executed by a computer for making the IMA group ID persistent, cause said computer to further perform storing a new IMA group ID in memory.

22.   The computer-readable medium of claim 19 having stored thereon additional instructions, said additional instructions when executed by a computer for using only matching links, cause said computer to further perform screening IMA links having an IMA group ID that are involved in unintentional IMA group restarts for a matching stored IMA group ID.

23.   The computer-readable medium of claim 19 having stored thereon additional instructions, said additional instructions when executed by a computer, cause said computer to further perform looping back all links.

24. The computer-readable medium of claim 19 having stored thereon additional instructions, said additional instructions when executed by a computer, cause said computer to further perform marking all links as unusable.

25. A line card for use in a switch, comprising:

a central processing unit (CPU);

a system controller connected to the central processing unit;

random access memory (RAM) connected to the system controller; and

a group restarter connected to the CPU, controller, and RAM wherein the group restarter restarts an IMA group.

26. The switch of claim 25 wherein the processor monitors a plurality of links to determine state changes of the links and enforces an IMA-ID check when an insufficient links state is reached.

27. The switch of claim 26 wherein the processor relaxes the IMA-ID check when all the links are in an error state and re-enforces an IMA-ID check when at least one link of the plurality of links recovers from an error state.

28. The switch of claim 27, wherein the processor enforces the IMA-ID check if a near end IMA-ID does not match a far end IMA-ID.